

(d) time-shifting the need to expend capital to visit the customer's site or to purchase components until sufficient aggregate customer commitments have been received to support volume pricing data from a component supplier;~~(e) receiving a commitment from the potential customer to purchase at least one electric power generation system;~~ (e) forecasting the creation of a new market for non-polluting energy generation systems, which market consists of all the customers whose demand for like components has been aggregated to make the price cost-effective; (f) scheduling an energy specifier visit to the customer's site for analysis, documentation, and confirmation of the proposed installation of the purchased electric power generation system; (g) receiving a confirmation from the specifier of the practicality and cost-effectiveness of the installation of the purchased electric power generation system; and (h) scheduling installer and electrician visits to the customer's site to complete installation, testing and activation of the purchased electric power generation system.

REMARKS/ ARGUMENTS

Applicants hereby request continued examination under 37 C.F.R. 1.114. The appropriate fee is enclosed.

Applicants also request a two-month extension of time. The appropriate fee is enclosed.

This amendment is in response to the Final Office Action of April 26, 2004, and in accordance with 37 C.F.R. 1.114(c).

Claims 1-49 are pending in this application. Claims 1, 4, 6, 8-9, 12-14, 17-20, 23, 26, 28, 30-31, 38, 41-42, and 45-49 are amended herein to clarify the invention and to make it clear that among the key features of this invention are demand aggregation, time-shifting and market creation to help customers better meet energy needs in today's world of increasingly high oil prices, polluting sources, global warming, increasingly dependence on unstable energy-producing countries. The present amendments also further distinguish the invention from the art cited by the Examiner. In addition, the application has been simplified by canceling claims 2-3, 5, 10-11,

16, 24-25, 27, 32-38, and 39-40..

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present, particularly in light of the claim amendments herein. Thus, applicants respectfully request reconsideration of the Examiner's position based on the amendments to the claims herein, and the following remarks.

Section 112

On page 2 of the Action, the Examiner rejected claims 17-20, 33 and 39-42 for alleged indefiniteness under 35 USC 112, second paragraph. Claim 33 has now been canceled. Accordingly, this ground of rejection for that claim is now moot. As to claims 17-20 and 39-42, the word "or" has been changed to "and." In addition, the lack of antecedent basis for the term "database" has now been corrected.

In addition, as to "lobbying," applicants are not simply advocating "lobbying" in general. Rather, there are three specific targets of lobbying activities described in the claims, namely (1) incentives to lower the price of non-polluting energy generation systems, (2) legislation to require utilities to buy back energy generated without pollution, and (3) legislation to require utilities to buy back such energy at the retail rate. Therefore, applicants believe that this ground of rejection for claims 17-20 and 39-42 has now been overcome.

The Bowman Case is Not Citable Precedent

On page 3 of the Action, the Examiner has rejected claims 1-22, 47 and 49 under 35 USC 101, citing an unpublished opinion of the Board of Patent Appeals Interferences, namely Ex parte Bowman, 61 USPQ2d 1669 [not 1665] (2001). Yet that case is not official policy of the USPTO because the following statement appears very conspicuously at the beginning of the document that appears in the USPQ2d, namely on page 1670: "[Editor's Note: The Board of Patent Appeals and Interferences has indicated that this decision was not written for publication, and is not binding precedent of the board.]" (emphasis added). Clearly, then, if it is not precedent before the Board, it cannot be precedent within the US Examining Corps, and cannot be cited

against applicants. Thus, the Examiner's citation of this case is improper. Applicants respectfully request that the Examiner withdraw his rejection under 35 USC 101, because the rejection is based upon a non-precedential case.

The Patent Office is Not Following the Federal Circuit

Aside from the fact that the Bowman case is unpublished, it clearly does not reflect current law as established by the Federal Circuit. In particular, applicants respectfully suggest that the USPTO is not following the decision laid down in State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998). See also MPEP Section 2106. As is known, the State Street case was widely recognized in the public and among the Patent Bar as changing, or at least dramatically expanding, the law relating to "business method" patents. Yet neither the Board in Bowman, nor the Examiner here, even mentioned it. Applicants object to the Examiner's failure to discuss State Street, which is controlling precedent here.

The system at issue in State Street "facilitate[d] a structure whereby mutual funds (spokes) pool their assets in an investment portfolio (hub) organized as a partnership."

Similarly, the present invention facilitates the creation of new markets, facilitates the aggregation of demand for the environmentally friendly components involved, facilitates the lowering of the electric costs of the end-user, facilitates the marketing and installation of the these components by the user of the system, and facilitates the societal purpose of improving legislation by facilitating political advocacy related to environmentally friendly distributed energy generation systems.

The pooling of assets for the purposes of more efficient management in State Street is directly analogous to the present invention's aggregation of demand for more efficient pricing, and the present invention's time shifting features for more cost-effective collection of customer commitments and cash flow management.

The result in State Street was "the advantageous combination of economies of scale in administering investments coupled with the tax advantages of a partnership."

Similarly, a result of the present invention is the advantageous combination of economies

of scale in marketing, purchasing and installing environmentally friendly distributed energy generation systems, the creation of new markets for such systems, lowered costs for purchasers of such systems, improved forecasts of future markets for such systems, reductions in the costs of customer acquisition for such systems, the lowering of the costs and reductions of delays in filing applications for government incentives and financing for such systems. There are additional economies of scale in the present invention in its efforts to address societal issues of air pollution, ground water contamination and global warming.

The State Street system “allow[ed] an administrator to monitor and record the financial information flow and make all calculations necessary for maintaining ...” the fund configuration at issue.

Similarly the present invention allows the user of the entire system and method to monitor and record the information flows and make all calculations necessary in the attempt to market, specify and install environmentally friendly distributed energy generation systems, and also to aggregate demand and collect future commitments in order to forecast and create new markets for energy generation systems.

As mentioned in State Street, Section 101 is to be read expansively: “The plain and unambiguous meaning of § 101 is that any invention falling within one of the four stated categories of statutory subject matter may be patented The repetitive use of the expansive term ‘any’ in § 101 shows Congress’s intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101. Indeed, the Supreme Court has acknowledged that Congress intended § 101 to extend to “anything under the sun that is made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980); see also *Diamond v. Diehr*, 450 U.S. 175, 182 (1981). Thus, it is improper to read limitations into § 101 on the subject matter that may be patented where the legislative history indicates that Congress clearly did not intend such limitations. See *Chakrabarty*, 447 U.S. at 308 (“We have also cautioned that courts ‘should not read into the patent laws limitations and conditions which the legislature has not expressed.’ ... The dispositive inquiry is whether the claim as a whole is directed to statutory subject matter. It is irrelevant that a claim may contain, as part of the whole, subject matter which would not be patentable by itself.” (citations omitted)).

The Present Invention Does Include Limitations in the Technological Arts

Even aside from the Bowman case itself, the present invention, as amended herein, does indeed recite numerous limitations in the technological arts. It is not merely an “abstract idea” or a “pencil and paper” invention. For example, amended claim 1 now recites that energy demand data is aggregated over a number of potential customers, and this aggregation step is performed in a computer database. Support is found in the specification in paragraphs 0015, 0021, 0026 and elsewhere.

Other physical and technological structures are definitely required. For example, “receiving a commitment from a customer to purchase” an “energy system” is a legally binding contract that triggers the executory elements of the contract such as the company’s purchase of components, scheduling of site visits, filing of government and rebate and financing applications, expenditures of moneys, etc. Similarly, “arranging the purchase and installation of the purchased energy system” results in an energy consumer changing his relationship with the electric utility, selling his excess electricity into the electric grid, reducing the amount of pollution the utility creates, etc. Those steps are not possible without the “collecting [of] the data on energy usage” and the “calculating and reporting [of] the availability and costs of energy systems”.

In addition, the databases created by this system which represent momentary snapshots of the shape of the market for new energy technologies, the shape of the market segments that have contracted for new energy technologies, the shape of the market segments that have contracts for new energy technologies contingent on specified additional demand, the geographic contours of the regulatory landscape for new energy technologies and their financing, are all physical real world structures which are created, improved, updated or changed by the present invention.

In addition, the process of collecting signed contingent or futures contracts from consumers before a specifier needs to incur the cost of visiting the consumer to take the necessary measurements, consult the relevant data sources and make the necessary calculations, has a physical real world impact in that it shifts the cost burden for the specifier from pre-sale to post-sale. This has the additional effect of excluding pre-sale costs imposed by the presentation of a proposal to one potential customer who chooses not to purchase on the offering cost to a

later customer.

The present invention's system for distinguishing between customers who are eligible for regulatory advantages and those who are merely offered an immediate way to advocate politically for such regulatory advantages are both additional real world physical manifestations of the system.

The present invention's ability to create new markets for cost-effective non-polluting energy generation technologies is another concrete real world phenomenon which results in increased use of non-polluting energy generation technologies and decreased pollution from the burning of fossil fuels to create electricity.

The fact of the demand aggregation accomplished by the present invention is not only a real world fact in and of itself, but it results in the reduction of the cost to the end-user of these non-polluting energy generation systems and therefore increases their implementation and reduces the amount of greenhouse gases and pollution electric utilities release into the earth's atmosphere. These are not only real world effects, they are critically important to our world today given the trend toward global warming caused by the release into our atmosphere of greenhouse gases from the burning of fossil fuels.

Accordingly, since the present invention is clearly "technology-heavy," applicants request that the Examiner withdraw his rejection under 35 USC 101.

The Present Invention is Not Obvious

On pages 3-9 of the Action, the Examiner has rejected all claims under 35 USC 103(a) over various combinations of references Ishimaru, Dworkin, Ardalan, Bezos and Official Notice.

In light of the amendments to the claims herein, and the discussion below, applicants respectfully disagree, and request the Examiner to withdraw his rejections as to the remaining, amended claims.

None of the cited references, whether taken singly or in combination, discloses or suggests the present invention. Nor would a person of ordinary skill in the pertinent art be motivated to combine any of the cited references to produce the present invention.

Ishimaru et al.

Ishimaru et al. does not even discuss aggregation of customer demand at all, whether in the context of an energy supply system or otherwise. Indeed, the words “aggregate” and “aggregation” are not mentioned anywhere in the patent. Neither does this reference mention time-shifting of expenditures, or the forecasting or creation of new markets.

Yet demand aggregation, time shifting and market creation are all key features of the present invention. Instead, Ishimaru et al. relates to an invention designed to “allow power companies and town gas companies to make effective use of their respective facilities.” (col. 1, lines 42 - 45) Unlike the present invention, the cited patent is designed for large utilities, power generation companies rather than for typical energy consumers. Only large power generation companies and very large industrial companies which generate their own energy supply would be able to use the invention described in Ishimaru et al. Only such large energy generators would typically have the capacity and knowledge and financial ability to use the cogeneration systems described in Ishimaru et al. (col. 1, lines 46 - 61). It is well-known that typical residential and even commercial and industrial energy consumers do not possess the financial or technical resources to install cogeneration equipment – only large, sophisticated companies do. This invention, while not saying so explicitly, only makes sense for such extremely large energy generators. It does not relate to small or residential customers of a power utility, which might generate a small amount of electricity for their own needs.

In contrast, the present invention is applicable for virtually all energy consumers including residential end-users with no training or knowledge concerning the workings of electricity or power generation. Demand aggregation assists in accomplishing this goal. To the extent that Ishimaru et al. discusses the consumption of energy, it is primarily discussing the primary energy consumed by the power plant, utility or very large industrial consumer in order to power the equipment needed to generate electricity and heat. For that reason, when Ishimaru et al. discusses “the consumption of primary energy” it refers only to facilities at a “power plant” (col. 3, lines 52 - 56). That is also why the “primary energy” includes fossil fuels as well as atomic energy and hydroelectric power (col. 4, lines 21 – 24; col. 4, lines 30 - 34). It is well known that typical residential, commercial and industrial energy users cannot operate nuclear

power plants and typically do not divert rivers or dam water in order to generate the electricity they need. That is also why Ishimaru et al. mentions that “Primary energy consumption at a hydropower generating plant normally is negligible.” (col. 4 lines 34 - 35) That would not be relevant if the users of the disclosed technology were end-users or typical residential, commercial or industrial electricity customers. That is also why, even when discussing fuel cells, Ishimaru et al. discusses an “approximately 200 kw” fuel cell and its efficiency is compared with the efficiency of the rest of the power plant. (col. 5, lines 42 - 47) That is also why Ishimaru et al. discloses that “it is more economical to receive a hydrocarbon fuel (e.g. methane, propane or butane) at the fuel receiving means, and produce hydrogen gas therefrom at a reformer means to be used as the fuel for the fuel cell means.” (col. 6, lines 58 - 63) It is well-known that only power utilities and extremely large industrial generators of energy could operate both the reformer as well as the fuel cell.

Given the fact that Ishimaru et al. makes no mention of demand aggregation, and given the entirely different contexts and purposes of the present invention and that disclosed by Ishimaru et al., this reference, whether singly or in combination with other references, in no way discloses or suggests that any aspect of the present invention is obvious.

Dworkin

Dworkin is non-analogous art. It does not even relate to ENERGY, which is the focus of the present invention. Nor does it relate to aggregation of customer demand, or time-shifting, or market creation. Applicants can find no mention in the entire patent of any of the following keywords: “energy,” “demand,” “aggregate” or “aggregation,” “time-shifting,” or “market creation.”

Rather, Dworkin reveals an invention designed to give potential purchasers of computer equipment (not energy generation equipment) certain information concerning the price, availability, vendor and specifications of products or services they have chosen. The potential purchaser must then choose the product or service they want before the system transmits the order to the vendor.

In contrast, the present invention allows a potential purchaser to obtain a package of

products and services that work together to provide the purchaser with energy at less cost (and less pollution for the environment) even where no such individual product or service (such as might be available on a Dworkin taught system) could accomplish that. It is therefore far more than merely a means to present a consumer with more information on which to base a decision as in Dworkin. Rather the present invention actually aggregates demand, and uses the aggregation data to either decrease costs, or actually create a market for a package of energy-related products and services where none existed previously. Moreover, it simultaneously provides forecasting of that new market to the user of the system, a feature completely absent from Dworkin. In Dworkin, “the user must first tell the system the general type of product or service desired.” (col. 2, lines 6 - 7) In contrast, in the present invention, it is assumed that the user does not know what types of products or services could provide an energy solution that would reduce their energy costs and eliminate the pollution their use of energy contributes to the environment.

Dworkin claims to “assist[] a user in locating and purchasing” various goods and services. In contrast, the present invention does not assist users, but rather it accomplishes the entire spectrum of creating the new possibility, notifying the potential purchaser of the new possibility, securing the agreement of the purchaser to purchase, aggregating customer commitments to lower the cost, purchasing the component parts of the energy generation system, time-shifting the expensive site services until after the sale, organizing the required services attendant to the installation of the purchased components, installing the components, and testing and turning on the components, among others. Dworkin in no way teaches or anticipates these critical steps of the present invention or the other disclosed.

Dworkin claims to allow suppliers to notify large groups of potential buyers about new products or special promotions (col. 3, lines 13 - 14), but says nothing about forecasting new markets. The present invention does not just notify potential buyers about new products or special promotions, it makes existing products and services work for the consumer in ways that are not possible, much less known, before use of the present invention.

Ardalan et al.

This patent is non-analogous art. Ardalan et al. discusses only automatic meter reading systems. The present invention could be used with or without an automatic meter reading system. Ardalan et al. is otherwise unrelated to the present invention. Only after a customer has granted permission to a company to obtain its meter data and granted access to the meter in order to set up an automatic meter reading system, would the Ardalan et al. invention be relevant. In contrast, the present invention deals with the point in time before a customer has granted a company permission to access its meter.

Bezos et al.

This patent is also non-analogous art. Bezos et al. has nothing at all to do with energy or demand aggregation. It concerns only “an internet based referral system that enables individuals and other business entities (“associates”) to market products, in return for a commission, that are sold from a merchant’s Web site.” (first lines of Abstract) In contrast, the present invention does not deal with a referral system only to market products that are sold from a merchant’s web site. Rather, it goes well beyond just products, well beyond just products sold from a web site, and well beyond just offering commissions. What is offered to consumers is a package of energy-related products and services that is not orderable from a web site in part because the correct package of products and services is different for each consumer, and in part because no web site offers such packages, and in part because no web site can offer it at below the replacement cost of the electricity that would not have to be bought because of the package of products and services.

The purpose and accomplishment of the referral system revealed by the present invention is to lower the price for the consumer not just through a commission, but rather by fundamentally lowering the purchase price by facilitating the aggregation of sufficient demand for the components across the initial consumer and those referred. Bezos et al. does not include any of these aspects of the current invention.

Discussion of Cited References and Amended Claims

Ishimaru et al. may teach a specialized kind of energy supply method, but it does not disclose, suggest or motivate any of the present inventions' amended claims relating to collecting data on energy usage from an individual customer, aggregating customer commitments from groups of potential customers, and component data from a plurality of suppliers, and calculating and reporting costs of energy usage expected by the individual customer. (col. 10, line 14 – col. 11, line 12).

Although Ishimaru et al. teach a certain energy supply method and system for optimizing energy cost in a currently functioning energy system, and optimizing energy consumption and emission of pollutants in a currently functioning system, (col. 10, line 14 – col. 11, line 12), the energy supply system discussed therein is unrelated to the present invention, which does not relate to a currently functioning system, but rather to a future system. Accordingly, none of the teachings of Ishimaru relate to or make obvious the present invention.

Ishimaru et al. teaches an invention related only to a power utility sized energy supply system which itself consumes energy and heat and may be directly connected to a large customer using the heat byproduct from the energy generation processes. This is a fundamentally different context than that disclosed in the present invention which provides a method and a system of letting an electricity end-user, including an unsophisticated residential consumer, input simple data about their situation so that the system can determine, using demand aggregation, what components and services and financing could be provided so as to lower the end-user's electricity costs and eliminate the pollution caused by electricity generated for that end-user.

For example, references to “primary energy” (col. 10 line 38), “heat consuming installation” (col. 10 line 17), a “control unit” controlling “the type of energy (electricity, heat or combustible gas) used by each energy consuming installation of the energy consumer” (col. 10 lines 27 - 31), “governmental order(s)” (col. 10 line 50), and other components make clear that the entire discussion must relate to large energy generating stations because it is well-known that end-user individual customers such as residents or small businesses would never have such components.

The “energy demand” referred to in Ishimaru et al. is fundamentally different than the energy demand of the present invention. The “energy demand” in Ishimaru et al. refers to the

“demands for electric power and heat” of the “power plant” or “energy supply system” (col. 3 line 1, col. 3, line 53, col. 10 line 14 et seq.). Only in that context do Ishimaru et al.’s references to the use of a wattmeter (col. 4, line 8) and to measuring heat (col. 4 lines 8 - 12) make sense. The same is true for Ishimaru et al.’s reference to an energy demand estimating device” (col. 10 lines 14 et seq.) A wattmeter, any measurements of heat, and an energy demand estimating device, are neither mentioned in nor required for the present invention. It is well known that none of these are generally found with typical end-users of electricity, such as residential or small business energy consumers.

Part of the innovation of the present invention is that it provides an automated way to collect aggregate data on energy usage from unsophisticated end-users and by requesting simple data on electric usage and then using it in estimation algorithms to produce the annual energy usage necessary for the system.

Collecting data on energy usage was not new to Ishimaru et al. The present invention’s method of collecting such data is new to the industry. Ishimaru et al. explicitly states “Energy demand may be determined by a well-known method.” (Column 4, lines 6-7). Data on energy usage is typically collected in the aggregate per month or per billing cycle. Alternately energy usage is occasionally collected by direct measure on a periodic basis. (col. 9, line 55 – col. 10, line 11) The first is inexpensive but typically requires direct access to the customer’s billing records. The second is typically extremely labor-intensive as well as instrument-intensive and therefore is extremely expensive.

The present application provides for a novel series of methods for inexpensively and remotely estimating the energy usage sufficiently to determine which non-polluting systems singly or in conjunction could provide sufficient energy so that the net annual energy to be generated approximated the annual net energy usage. Ishimaru et al. do not in any way suggest any such methods of collecting data on energy usage, nor is it attempting to collect the kind of data contemplated by the present application. Whereas Ishimaru et al. would need precise energy usage data and its change over time per in-system generator fed to the controllers referenced in order to change the various levels of fuel and allocation according to various formulas; the present application needs only annual net estimates of total energy usage by end-user. These

methods and the results they produce are not related or comparable. Ishimaru et al.'s system permits the real-time optimization of energy generation equipment on a large scale. The present invention's system permits an end-user to sign up in real time for components and services that will lower their cost of electricity and eliminate pollution by building a large market of individual purchasers, and permits the company supplying such components and services to shift the costs of specifying the components and services until after the consumer has contracted for them.

Similarly, whatever Ishimaru et al. may teach regarding the collecting of energy supply data from a plurality of supply components, it teaches nothing concerning energy component specifications data from a plurality of component suppliers. However, the present application teaches the collecting of cost and specification data, not on energy supply but on energy generation components. Due to the vastly different contexts these are not comparable nor related.

For the same reasons, Ishimaru et al. may teach calculating and reporting costs of energy usage expected by the customer, but does so only in a context completely different from that of the present invention. Whereas, Ishimaru et al. may teach the calculating and reporting of the costs of energy usage expected by the customer with the view of using that data to control the flow of fuel and the allocation of energy generation between devices, the present application teaches the calculating of the amounts of energy usage actually used by the customer, with the view towards specifying and sizing components and services that will allow the consumer to lower its energy costs over time while reducing pollution. The present application does not report such calculations real time as taught by Ishimaru et al., but rather uses such calculations over defined periods, typically a year, internally to accomplish the real world objectives of matching the components which would serve the customers' needs with the cost structure which would apply if the customer purchased and installed such components.

Although Ishimaru et al. may relate to energy systems (power generation equipment) installed at the customer premises, many companies have operated in that manner for many years prior to Ishimaru et al. (1995) Ishimaru et al. does not teach a way of arranging the purchase and installation of the energy system, as does the present invention. Neither does Dworkin teach such a system, particularly not for a non-technical end-user. Dworkin merely provides a method

for potential purchasers to more easily order specific computer (but not energy-related) components where they already know what they need, and already know what specifications they are interested in. In the present invention, unlike taught in Dworkin, a non-technical end-user would NOT need to specify the specifications in order to be able to use the database to retrieve products at the best available price. Rather, the non-technical end-user, in fact any homeowner or small business owner, would be able to use the database to retrieve not just individual products but a complete energy generation system solution, not only at the best available price, but at a better price because of the demand aggregation and time shifting, ideally at a price less than their current cost of electricity. That is a significant and non-obvious improvement over Ishimaru et al. or Dworkin, or the two taken together. A user of the invention in Dworkin would not be able to choose an energy generation system, much less one that would lower his costs and eliminate pollution, because such systems are not commodities sold in mass in the generic configurations. Rather, they must be customized to the individual user as accomplished in the present invention. The present invention is a novel mass-customization system, unlike Dworkin.

Whereas Ishimaru et al. (but not Dworkin) permits optimizing emission of pollutants for the large-scale generator of energy, the present invention provides a cost-effective method of eliminating emissions altogether for the portion of the energy demand generated by the installation ultimately chosen and implemented by any of many end-users.

Moreover, Dworkin includes no system for customizing the installation of components, no method of demand aggregation, no way to lower costs or create markets for components or services where such markets did not previously exist, and no system for shifting the cost of specifying the systems needed until after the customer has contracted for it. In fact, Dworkin includes no method at all for any systems or components that require specifying for a particular consumer.

For all of the foregoing reasons, it would have been impossible for one skilled in the art at the time the invention was made to modify Ishimaru et al. to include the arranging the purchase and installation of energy systems (since purchasing and installing is unrelated to Ishimaru et al.) Similarly, it would also have been impossible for one skilled in the art at the time the invention was made to modify Dworkin to include the types of energy generation systems discussed in the

present invention, such as demand aggregation, time shifting, market creation or market forecasting

As per Claims 14, 30, and 36, Ishimaru et al. may teach a method and system in which energy usage is discussed as are energy generation preferences, solar cells, fuel cells and wind power generators, however, the energy usage being discussed is, as explained above, in the context of supplying energy for the power generation equipment of a large scale power utility or large industrial energy producer and consumer. Moreover, the energy usage discussed in Ishimaru et al. is of the momentary real time type that would be needed in Ishimaru's system, rather than the broader picture, cumulative energy usage estimation needed in the present invention. The data involved are different, as are the contexts in which the data are used, between Ishimaru et al. and the present invention.

In addition, when Ishimaru et al. recites, "The system wiring 13b may receive electricity generate by a solar cell (not shown) and a wind power generator (not shown)" (col. 9, lines 27 - 29) it is referring to electricity inside the energy box 7 which is the power plant or utility provider of electricity. The references to the fuel cell (e.g. col. 10, line 24) are the same. This is a fundamentally different concept than that within the present invention. Ishimaru et al. is merely stating the obvious that if electricity is needed to run the energy generation equipment, that electricity may be obtained from solar cells, wind power turbines, or fuel cells. The present invention, in contrast, describes a system in which an end-user could determine whether they could install a non-polluting energy generation system and save money by doing so, and also could contract for the components and services to finance and implement those components at the offered price, below their current electricity costs. That price is calculated according to demand aggregation and time shifting. These features are well beyond Ishimaru et al. and in no way rendered obvious by Ishimaru et al.

As per Claims 14, 30 and 36, Dworkin teaches nothing specifically about data on energy usage, historical or anticipated electric power usage, energy generation preferences, solar cells, fuel cells, or wind power generators. Dworkin may teach a method and system in which products and services are offered to potential purchasers, and energy generation components, and solar cells, fuel cells and wind power generators, could theoretically be among such products,

however, it is well known that merely wanting to purchase such components does not provide the home-owner or business-owner with sufficiently detailed specifications to be able to know what components to order, or how to install them, or whether they will cost extra money or save money compared to current electricity purchase costs, without expert assistance that is not contemplated by Dworkin.

Although it is well known that utilization of wind power generators and solar cells is possible if there is adequate amount of these resources, that does not mean that it is obvious how to use such data to determine whether such systems could be installed singly or in combination to lower the cost of energy for the end-user, or to determine how on a macro level to time shift the more labor-intensive aspects of specifying, or to aggregate the data across many end-users to lower the costs for all of them. That is what is accomplished by the present invention

Whereas Ishimaru et al. collects data to feed to its real time controllers to control the quantity and allocation of generating capacity, and Dworkin collects data on a customer's preferences and needs to provide the customer with purchase choices, neither collects the kind of data described in the present invention to allow the specification of energy generation systems and components, and neither use that data to lower costs or to achieve pricing that is below the customer's current cost of electricity. Plenty of inventions collect data, but none do so as the present invention does for the purposes and uses that the present invention makes of them. Nor does Ishimaru or Dworkin or any other disclosure use such data to calculate how a multitude of energy generators could be made affordable across a market of such energy consumers, as does the present invention.

As per claims 12, 22, 34 and 44, Ishimaru et al. and Dworkin may teach methods or systems in which some customer is kept informed of some changes or some new developments in available products or specific energy systems, costs and financing options, but neither teaches, as does the present invention, how to provide customers not with the raw updated information, but with the information factored into the precise question that the consumer must answer at the moment of purchase of a new, non-polluting energy generation system: "can I lower my electric costs and help decrease the pollution created by the energy I use?" In addition, not only does the present invention collect such updated already existing information, it creates new lower pricing

by aggregating more consumers, and by changing the regulatory environment through lobbying, and then updates the offer to the consumers. Therefore, unlike Ishimaru et al. and Dworkin, the present invention teaches not just updating information, which was not novel to Ishimaru and Dworkin, but the present invention teaches how to use the system disclosed to automatically aggregate demand and thereby lower costs and thus create new pricing information over time, which it then automatically provides the customers in the form of an offer. Neither Ishimaru et al. nor Dworkin teach or suggest any of these aspects.

The innovation in the present invention is not that the customers are informed by automatic email alerts, but rather that the system in the present invention creates changes in the market by aggregating demand and changing the regulatory environment, and then having created the opportunity for the customer automatically informs them and signs them up remotely. Neither Ishimaru et al. nor Dworkin teaches anything related either to market creation, or to automatic contracting as does the present invention. It would not have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ishimaru et al. or Dworkin to include these aspects of updating customers whether by email or any other method.

As per claims 16 and 38, Ishimaru et al. may teach optimizing energy consumption and emission of pollutants. However, that is only in the context of a large utility power generation station or large industrial power generator and consumer. The general goal of reducing pollution is certainly not a new one. Ishimaru et al. accomplishes it for a large utility power generation station or large industrial power generator and consumer. The present invention accomplishes it through creating a mass market for customized non-polluting energy generation components, financing and installations. The means are unrelated although both may accomplish purposes related to reducing emission of pollutants.

The present invention is not concerned with optimizing energy consumption, but rather eliminating the emission of pollutants from the generation of electricity.

Although marketing, advocating politically, and generating unpaid publicity are certainly well known, the particular types and purposes of marketing, advocating politically, and generating unpaid publicity disclosed by the present invention are novel and non-obvious.

Marketing typically means the act of selling or promoting a sale. However, in the present

invention, not only is typical marketing envisioned, but in addition, end-users' input of their own data and receipt of a customized offer at a specified price is conditional on a number of other users' input of their data, and therefore, since the offers will include a decrease in price for electricity and the elimination of polluting emissions, the end-users have an incentive to share the offer even aside from any cash incentive or rebate offered. That is not only novel, but unanticipated by Ishimaru et al, Dworkin, or any other prior art. It takes advantage of three of the novel aspects of the present invention: the automation and cost-effectiveness of the process, the time shifting of the expenditure of capital on a new customer until after that customer has contracted, and the volume-sensitivity of the non-polluting energy generation technology industry.

In addition, advocating politically for changes to specific regulations opens new markets by lowering costs over defined geographic areas. For example, many states have "net metering" laws that require a utility to buy back from a consumer electricity generated without pollution. States without net metering can be lobbied to enact it. In another example, many states provide subsidies, rebates or tax credits for generating electricity without pollution. And states that do not offer such incentives can be lobbied to enact them.

The reasons that the system works are that individual end-users are offered attractive pricing based on time shifting and demand aggregation, and the demand aggregation is enhanced by their participation in generating new publicity. This is the present invention's unique, novel and non-obvious way to get around the catch-22 in the industry: insufficient demand causes prices too high for sufficient demand; and prices are too high for sufficient demand which would lead to lower prices. Neither Ishimaru et al., nor Dworkin, nor any other prior art discloses or suggests these aspects.

Other contributors to demand aggregation are advocating politically for changes in the law that open new markets, and unpaid publicity.

While advocating politically is well-known, never has a product or service included within its marketing system a way to contribute to the political process in such a way as to reduce the price or expand the market of a product or service already sold or offered to that customer. In addition, the present invention creates the incentives for the end-user to politically advocate in

order to lower his own cost or increase his eligibility, which simultaneously opens the system to end-users who were previously not eligible. Moreover, the political goals mirror society's overall goal of reducing pollution and minimizing global warming. These are uses of political advocacy that are completely novel and certainly not predicted by any prior art.

Obtaining unpaid publicity is also a well known marketing tactic. However, no prior art uses the customer data collection system to supply customers and potential customers with the connections, media contacts, educational materials and opportunities to generate unpaid publicity that drives demand aggregation and lowers the price for that customer. As with advocating politically, and other marketing techniques, this type of generating unpaid publicity is not found in the prior art or anticipated by any prior art.

As per claims 9 and 31-32, Ishimaru et al. and Dworkin do not teach all the limitations of claims 9 and 31-32. While Ardalan et al. may teach a method and system for automatic remote access to electronic meters using a TCP/IP protocol suite, wherein the data on energy usage is collected from an Internet Web site (Abstract; column 4, lines 50 - 53), it says nothing about collecting energy usage data interactively from a web site. Only after a customer has granted permission to a company to obtain its meter data and granted access to the meter in order to set up an automatic meter reading system, would the Ardalan et al. invention be relevant. In contrast, the present invention deals with the point in time before a customer has granted a company permission to access its meter.

Although use of a web site is well known, the ability to interactively collect energy usage data via a website in order to provide customers a real time offer of sufficient energy generation components, ancillary required components and services for installation of such energy generation components, and the financing of such a purpose is an entirely novel and non-obvious application of web technology. Moreover, there is no precedent for interactively using the web site to collect the data from many customers and aggregate it over time to lower unit prices and immediately forecast and offer customers the lower prices contingent on sufficient aggregate demand.

The collecting of meter data and supplying it to a website as may be taught by Ardalan et al. is unrelated to the interactive uses of a web site in the present invention. In the present

invention, no data are collected from a meter configured so as to be available to a web browser. Since the present invention is seeking among other things the agreement of the customer to the proposal offered by the website the type of remote data output from a meter taught by Ardalan would be insufficient for the purposes of the present invention. The present invention can collect the data necessary to fulfill its purposes in one Web session, rather than having to read the meter for an entire year, or some other long period of time, as Ardalan would require. Such a delay would render the current invention useless. Therefore, Ardalan teaches away from the present invention.

Regarding claims 21, 43 and 45 – 46, as indicated above, Ishimaru et al. and Dworkin do not teach all the limitations of claims 21, 43 and 45 – 46.

As per claims 21, 43 and 45 – 46, Bezos et al. may teach a method and system for Internet-based customer referral arrangement, wherein, if the customer selects a referral link, the commission is automatically credited to an account of the referring associate (Abstract), however, in Bezos et al. the sole purpose for a customer to refer others is to gain the commission, whereas in the present invention, a customer has the incentive to refer others to speed up the time when enough demand will be aggregated so that the customer's purchase and installation can be completed, and/or to lower the price at which the customer can purchase the non-polluting system, and/or to further benefit the environment via the educating of other customers, via the installations of other customers, and via the advocacy for regulatory changes. None of these aspects of a customer referral system exist in the Bezos et al. or in other prior art.

In addition, the present invention meets many long-felt and unsolved needs. Just look around. Very few individual customers are buying solar collectors or other alternative energy supplies because they don't know how to do it and because it is too expensive. It is too expensive because the aggregate demand is not there to reduce the price. That is the beauty of the demand aggregation aspect of this invention.

Conclusion

Thus, for the reasons discussed above, it is believed that none of the references cited by the Examiner, whether taken singly or in combination, disclose or suggest the unique

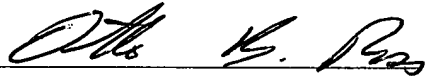
combination of elements disclosed and claimed in the present application, as amended. Nor would a person of ordinary skill in the pertinent art be motivated to combine the references to produce the present invention. Therefore, none of the remaining claims, as amended, are rendered obvious by any of the cited references, either taken singly or in combination.

Applicant submits that, in light of the amendments made herein and the discussion above, the Examiner's rejections of the claims under 35 U.S.C. 101, 103(a) and 112 have now been overcome. Thus, all remaining claims, as amended herein, are now believed to be allowable. Accordingly, applicant respectfully requests that a timely Notice of Allowance be issued.

Request for Telephone Interview

Applicants further request a telephone interview with the Examiner, in order to further explain the invention, its importance and the amendments and points made in this paper. It is requested that an appointment for a telephone interview be scheduled.

Respectfully submitted,

By: 
Otho B. Ross
Attorney for Applicants
Reg. No. 32,754
475 Park Avenue South, 15th Floor.
New York, NY 10016
Tel. 646-765-6233
Fax 603-375-7734

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